Water Utility Enterprise
Preliminary Report

April 1996

Santa Clara Valley Water District

April 2, 1996

Board of Directors:

This letter formally submits the recommended water rates for 1996-97 and the supporting report required by the District Act.

The Water Utility Enterprise remains in sound financial condition. Operating expenditures in the first 9 months of the current fiscal year are running well below budget. However, water banking agreements under discussion are expected to bring total spending for the year close to the 1995-96 budget. Assuming current plans for the fiscal year 1996-97 budget are successfully implemented, overall spending would decrease next year.

Staff recommends that water rates in the North County (Zone W-2) remain at current levels for fiscal year 1996-97. If the recommended water charges are adopted by the Board, it will be the fourth consecutive year without a rate increase in the North County.

In the South County (Zone W-5), staff estimates that revenues and costs will be in approximate balance this fiscal year. Assuming that operating expenditures remain at approximately current levels, staff recommends that water rates in the South County (Zone W-5) remain unchanged for fiscal year 1996-97.

Costs in South County are expected to increase significantly when capital improvements currently under construction are completed. Over the next year, staff will be analyzing overall costs in South County and identifying alternatives for recovering operating and capital costs. Projected rates under the current structure will be compared to approaches that would reallocate costs among South County customers.

The report which follows describes the District water supply and demand situation and outlines the financial conditions underlying the recommended rates.

Stanley M. Williams
General Manager

R8888c

SANTA CLARA VALLEY WATER DISTRICT

WATER UTILITY ENTERPRISE REPORT

PRELIMINARY

Prepared by

John Ryan

and

Nancy Immekeppel

Under the Direction of

Nai Hsueh
Executive Project Manager

APRIL 1996

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PREFACE

This is the twenty-fifth annual report on the status of the District's Water Utility Enterprise. In accordance with Section 26.5 of the District's Act, the District annually prepares a written report on the District's activities on the protection and augmentation of the water supplies of the District. As required by the District Act, this report provides information on the present and future water requirements of the County, the water supply available to the District, future capital improvement and maintenance and operating requirements, financing methods, and the water charges by zone for agricultural water and nonagricultural water.

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I. Rate Recommendation

Recommended Water Rates for 1996-97

Recommended water charges for fiscal year 1996-97 North and South County have been developed based on the revenues required for water utility operations and planned capital improvements in each area. The recommended rates for North County, Water Charge Zone W-2, and for South County, Water Charge Zone W-5, are unchanged from those in effect for the past 3 years. The boundaries of Zones W-2 and W-5 are shown on a map in Appendix C.

Table 1 shows the water rates in effect for fiscal years 1992-93 through 1995-96 and the recommended rates for fiscal year 1996-97. The District's pricing policy calls for "levying a rate to recover costs incurred for current water users," as well as the objective of stable rates over a 5-year period. The recommendation for 1996-97 is based on both the immediate needs for the coming year as well as the desire to provide customers with stable and predictable rates over the next 5 years. The remainder of this section discusses estimated financial results for 1995-96 and a projection of 1996-97 plans. Section II describes the analyses underlying the rate recommendations in each zone. Section III discusses challenges facing the water utility.

TABLE 1

SUMMARY OF WATER CHARGES
(Dollars per Acre-Foot)

	1992-93	1993-94	1994-95	1995-96	Recommended 1996-97
Zone W-2 Municipal and Industrial	262.00	240.00	240.00	240.00	240.00
Agricultural	43.75	43.75	43.75	43.75	43.75
Contract Treated Water Surcharge	70.00	70.00	70.00	70.00	70.00
Zone W-5 Municipal and Industrial	117.00	108.00	108.00	108.00	108.00
Agricultural	11.50	11.50	11.50	11.50	11.50

Review of Current Results and Outlook for 1996-97

Table 2 shows the revenue requirements that are the basis for the recommended rates and details the split between operating and capital outlays, along with funds added to, or used from, reserves for water utility operations.

Revenues and Revenue Requirements

Overall revenues of the water utility, as shown in Table 2, were approximately $90 million in 1994-95. Because above average rainfall this winter is likely to keep water use down in the second half of this fiscal year, water utility revenues are estimated to hold at roughly $90 million in 1995-96. Despite recent strengthening in the Santa Clara County economy that is expected to lead to slightly higher water usage in the County, District sales and revenues are projected to remain unchanged in 1996-97 in part because of ample surface water supplies also available from San Francisco Water Department's Hetch Hetchy system and San Jose Water Company.

TABLE 2

OVERVIEW OF WATER UTILITY REVENUE REQUIREMENTS
($ Millions)

	Actuals 1994-95	Budget 1995-96	Estimated 1995-96	Projected 1996-97
Revenues	$89.5	$89.8	$89.5	$90.5
Revenue Requirements				
Operations	68.6	81.8	80.1	74.0
Capital Projects	21.1	11.6	10.2	7.4
Changes in Reserves	-0.2	-3.6	-0.8	9.1
Total	$89.5	$89.8	$89.5	$90.5

Total expenditures in 1995-96 are estimated to increase slightly over 1994-95. An $11 million decrease in capital expenditures is offset by a similar increase in operating outlays. Much of the increase in operating outlays is attributable to purchase of imported water and to unbudgeted outlays for anticipated water banking agreements.

In December 1995, the Board of Directors approved a $500,000 commitment to the 1994 Bay-Delta Accord. Estimated expenditures for 1995-96 also include $5 million to fund a water banking agreement which is expected to be finalized by June 1996.

Without these two items totaling $5.5 million, operations costs in 1995-96 would be $74.6 million or roughly the amount projected for 1996-97. Expenditure trends in budgeted operating programs in 1995-96 are well under budget through 8 months; consequently, $5.5 million for these items are estimated to be available in the operating budget.

Cost pressures are expected to continue in the future as labor costs, water purchase costs, and material costs increase. However, the District plans to reduce operating outlays in 1996-97 by not filling some vacant positions and other economies. Outlays for imported water are projected to be approximately $23 million in 1996-97 to purchase entitlements available under the District's supply contracts with the State Water Project (SWP) and federal Central Valley Project (CVP). The cost projections do not include any funds for the potential purchase of additional imported water entitlements or for additional banking agreements.

Capital Outlays

Revenue requirements for capital investments fluctuate markedly from year to year depending on the number and size of projects readied for construction. Compared with outlays in the 1980s for construction of Santa Teresa Water Treatment Plant ($60 million) and associated pipelines, current requirements for capital projects are relatively modest. In 1994-95, $21 million was appropriated, including $14 million for three large projects: (1) Phase I of the Parallel East Pipeline; (2) San Pedro Recharge Facility, and (3) mitigation work at Uvas Dam. Roughly $10 million is included in the 1995-96 budget for capital projects, and the projection for 1996-97 capital projects is approximately $7.4 million.

Water Utility Reserves

In 1995-96 total outlays slightly exceed revenues, and overall water utility reserves are estimated to decline by $0.8 million. This small change masks changes in individual appropriations; specifically, $20 million in uncommitted balances are available from 1994-95 to fund a $9 million addition to the Bureau Repayment Appropriation, and $4 million is added to other reserves. Even after the budgeted appropriations, $6 million remains uncommitted and available for 1996-97.

Assuming the recommended rates are adopted, 1996-97 revenues from operations are projected to exceed outlays by $9.1 million. These funds, along with the uncommitted balances, provide for a $10 million increment in the Bureau Repayment Appropriation and minor changes in other reserves.

II. Analysis of Future Water Charges

North County Analysis

Water Charge Zone W-2, North County, accounts for approximately 80 percent of District water sales, but because of higher water rates, over 95 percent of water utility revenue. Finances of the water utility enterprise are dominated by North County operations, and the North County rate analysis is based on financial information for the total water utility.

Ten-Year Outlook

Revenues, expenditures, and balances for the Water Utility's 10-year plan are summarized in Table 3. Potential water supply shortages, from both hydrologic and regulatory conditions, requires that additional water supplies be planned for the County. The need to improve the reliability of the District's water supplies and the efficiency of the in-county distribution system requires continuing investments in existing and new facilities. The projections in Table 3 incorporate the managerial and engineering assessments of expenditures necessary for operational needs, as well as capital improvements over the next 10 years. The projected outlays assume no major changes in District water supplies or operation expenses. Projected outlays are shown graphically in Figure 1.

Figure 2 shows the water rates needed to fund the water utility over the next 10 years. The capital improvement plan over the next 10 years totals $250 million. The projections in Figures 1 and 2 assume $175 million in revenue bonds will be sold to help finance capital improvements. Three bond financings are projected:

1998-99	$50 million
2001-02	$40 million
2003-04	$85 million

Basis for North County Recommendation

With the North County rate at its current level of $240 per acre-foot in 1996-97, projections of the water utility's finances, assuming no drought, indicate this same rate could continue through fiscal year 1999-00. As discussed in Section III, the District faces many uncertainties. The recommended rates will provide financial flexibility to respond to future droughts, the changing regulatory environment, and other challenges. In addition, it provides Santa Clara County retailers a stable rate regime for planning their operations.

The lower half of Figure 2 shows an alternate approach that draws down reserves to minimum levels in future years, but requires numerous rate changes in response to the year-to-year variations in projected capital investments. This approach is vulnerable to droughts, loss of property tax revenues, and changes to the assumed schedule for implementation of regulations governing disinfection by-products at water treatment plants. The District's current assessment is that compliance with these proposed regulations will not be required until the year 2000. The U.S. Environmental Protection Agency is expected to issue a timetable for these regulations in 1996, and if compliance is required prior to 2000, the District would need to accelerate its capital investment schedule assumed for this rate analysis. This could result in even greater rate instability than shown for the alternate rate projection.

($ Thousand)

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
REVENUES	Actual	Actual	Estimated	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Groundwater Sales	30,207	28,825	31,568	32,240	34,154	36,377	37,368	39,891	40,536	43,851	44,090	48,996	49,154
Treated Water Sales	31,931	31,926	32,860	32,587	32,860	33,170	34,560	36,515	36,850	39,050	39,960	44,240	45,200
Surface/Reclaimed Water Sales	238	262	148	149	150	151	152	157	160	170	173	190	190
Miscellaneous Revenue	3,760	3,420	2,538	2,426	2,436	2,427	1,991	1,857	1,872	1,889	1,906	1,925	1,944
Interest	4,177	7,277	5,872	5,693	6,072	3,385	4,025	3,269	3,098	3,684	3,827	4,925	2,482
Property Taxes	19,728	17,837	16,500	17,387	18,579	18,727	18,975	19,161	19,333	18,768	18,939	19,175	19,428
Bond, Loans, Grants	0	0	0	0	0	45,550	0	0	36,440	0	77,434	0	0
Return From Reserve	0	0	0	0	0	0	0	0	0	0	6,592	0	0
TOTAL REVENUES	90,041	89,547	89,486	90,482	94,251	139,787	97,071	100,850	138,289	107,412	192,921	119,451	118,398
EXPENDITURES													
Operating Expenses	36,693	37,979	40,951	40,320	44,297	46,166	49,195	52,306	54,474	56,767	59,841	62,978	66,234
Imported Water Purchases	15,675	19,383	28,200	22,689	85,746	31,691	31,871	26,055	26,114	26,143	26,192	26,191	26,671
Debt Service	11,152	11,192	10,946	10,957	10,954	10,865	14,837	14,841	14,843	17,297	14,944	15,336	15,368
Total Operations	63,520	68,554	80,097	73,966	140,997	88,722	95,903	93,202	95,431	100,207	100,977	104,505	108,273
Capital Projects	9,182	21,123	10,162	7,416	14,781	29,488	15,914	19,294	23,119	22,024	52,896	64,384	4,129
TOTAL EXPENDITURES	72,702	89,677	90,259	81,382	155,778	118,210	111,817	112,496	118,550	122,231	153,873	168,889	112,402
RESERVES													
San Felipe O&M Reserve	1,508	1,629	1,779	1,779	1,779	1,779	1,779	1,779	1,779	1,779	1,779	1,779	1,779
Supp Water Supply Appr.	20,800	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Operating Contingency	1,000	403	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Working Capital Appr.	0	6,271	6,819	5,975	6,539	6,712	7,309	7,584	7,769	8,226	8,290	8,583	8,894
Rate Stabilization Fund	0	0	1,000	1,000	1,000	1,500	2,000	2,500	2,500	2,500	2,500	2,500	2,500
Replacement Appr.	5,000	5,150	5,356	5,624	5,905	6,200	6,510	6,836	7,178	7,536	7,913	8,309	8,724
Future Years' Capital	13,382	7,341	9,000	14,824	12,728	21,051	22,337	12,436	15,933	16,015	29,757	4,497	9,766
Construction Reserve	0	0	0	0	0	17,286	2,846	0	15,715	0	24,867	0	0
Bureau Repayment Appr.	37,178	49,277	58,277	68,277	8,000	3,000	0	0	0	0	0	0	0
Uncommitted Funds	26,294	20,081	6,148	0	0	0	0	0	0	0	0	0	0
TOTAL RESERVES	105,162	110,152	109,379	118,479	56,951	78,528	63,781	52,135	71,874	57,056	96,106	46,668	52,663

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TABLE 3
TEN-YEAR WATER UTILITY PLAN

Projected Expenditures

1995-96 to 2005-06

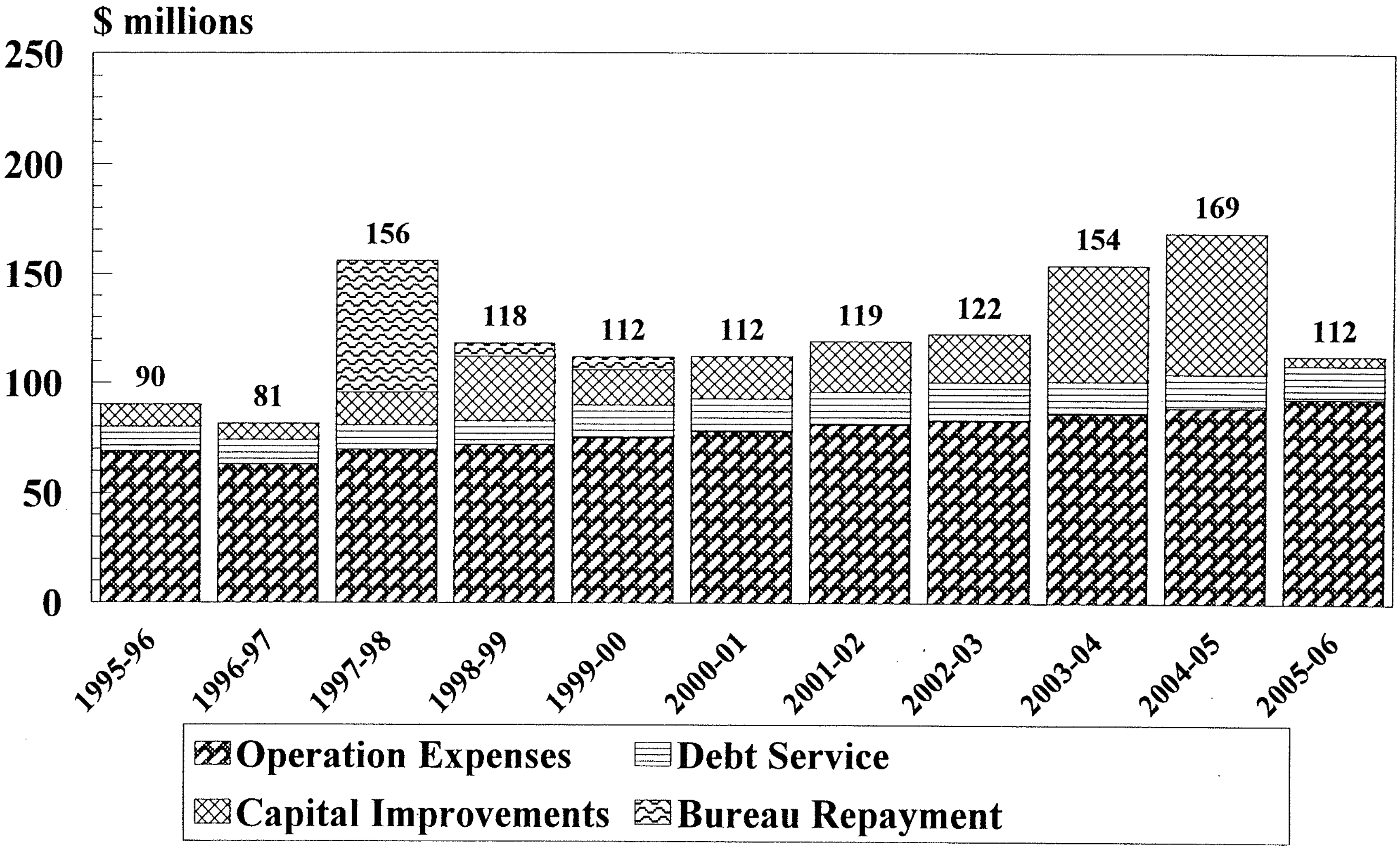
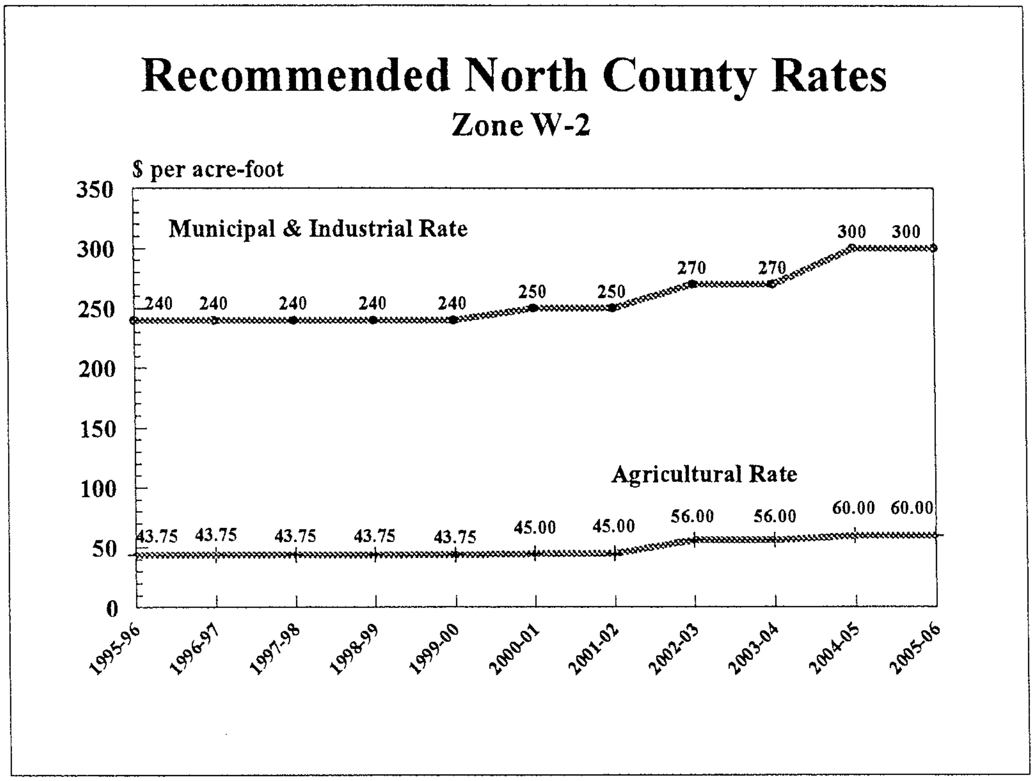


FIGURE 1

FIGURE 2


Recommended North County Rates
Zone W-2
$ per acre-foot
350
300
250
200
150
100
50
0
Municipal & Industrial Rate
240 240 240 240 240 250 250 270 270 300 300
Agricultural Rate
43.75 43.75 43.75 43.75 43.75 45.00 45.00 56.00 56.00 60.00 60.00
1995-96
1996-97
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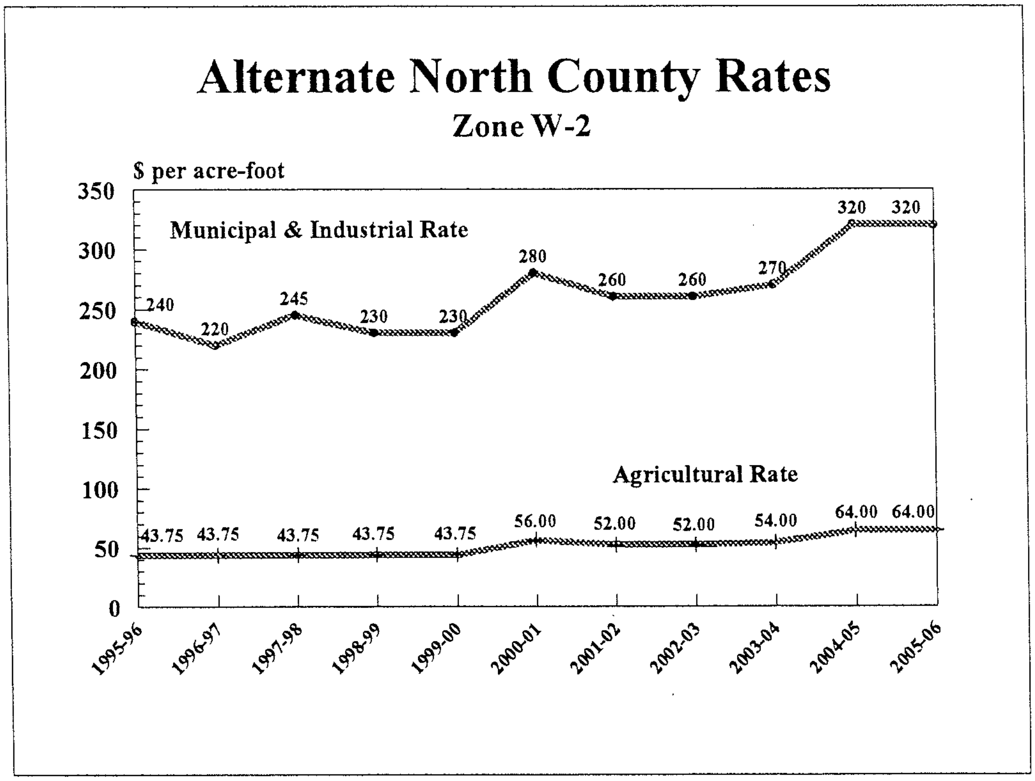
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06


Alternate North County Rates
Zone W-2
$ per acre-foot
350
300
250
200
150
100
50
0
Municipal & Industrial Rate
240 220 245 230 230 280 260 260 270 320 320
Agricultural Rate
43.75 43.75 43.75 43.75 43.75 56.00 52.00 52.00 54.00 64.00 64.00
1995-96
1996-97
1997-98
1998-99
1999-00
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06

South County (Zone W-5) Revenues and Outlays

Rates in the South County (Water Charge Zone W-5) are based on the costs of specific facilities, imported water costs, and general costs related to managing the groundwater basin, ensuring water quality, and measuring water supplies and usage. South County revenues less costs resulted in a deficit of $422,000 in Fiscal Year 1994-95. Estimates for Fiscal Year 1995-96 show a somewhat smaller deficit; however, projections for 1996-97 show higher costs resulting from increased purchases of imported water. Table 4 shows financial results for 1994-95, estimated results for 1995-96, and projected results for 1996-97, assuming the current and recommended rate of $108 per acre-foot for M&I water is in effect. Costs after 1996-97 are of special concern because the following capital projects now nearing completion will be amortized in 1997-98 for payment by Zone W-5:

- San Pedro Recharge Facility—Estimated cost $3.9 million
- Uvas Dam Seepage Mitigation—Estimated cost $1.3 million

Current practice has been to recover capital costs in South County by amortizing the investment over 25 years. Amortization of the $5.2 million cost of these capital improvement projects will amount to approximately $400,000 per year. This will more than double current amortization costs of $327,000, which is the estimated South County share of capital improvements completed since 1987 on Anderson Dam, Coyote Dam, and other South County facilities.

Substantial completion of San Pedro Ponds and Uvas Dam Seepage Mitigation is likely by July 1, 1996; however, total costs will not be known until final change orders are in and the contracts are closed out. Amortization is projected to begin in fiscal year 1997-98.

With the completion of the San Pedro Recharge Facility, more federal water from the Central Valley Project can be recharged in South County, and imported water costs are projected to increase from $1.6 million to approximately $1.8 million in 1996-97 and $2.3 million in 1997-98.

Thus, by 1997-98, South County is facing projected cost increases of $400,000 for amortization and $700,000 for water purchases for a total of $1,200,000 or 27 percent over estimated costs of $4,441,000 in fiscal year 1995-96. The rates in Figure 3 show the District's projections of rates in Zone W-5 over the next 10 years.

Basis for South County Recommendation

At the present time, projections of water utility operations and costs in South County are complicated by the changes that are being implemented to improve South County water supplies. Past cost history provides a starting point but with the expanded recharge capacity available upon completion of modifications to the San Pedro ponds, future costs will depart from past trends.

Using current expenditure levels, the recommended rates; $108 per acre-foot for M&I and $11.50 per acre-foot for agricultural water, are projected to result in a deficit in 1996-97. However, if cost reduction efforts are successful in reducing South County expenditures by 5 percent in 1996-97, revenues and expenditures would be in approximate balance. Staff recommends a conservative approach to financial analysis for South County that avoids rate increases until new data is available on the impact of anticipated cost reductions and on the future volume of federal CVP water recharged in South County.

TABLE 4

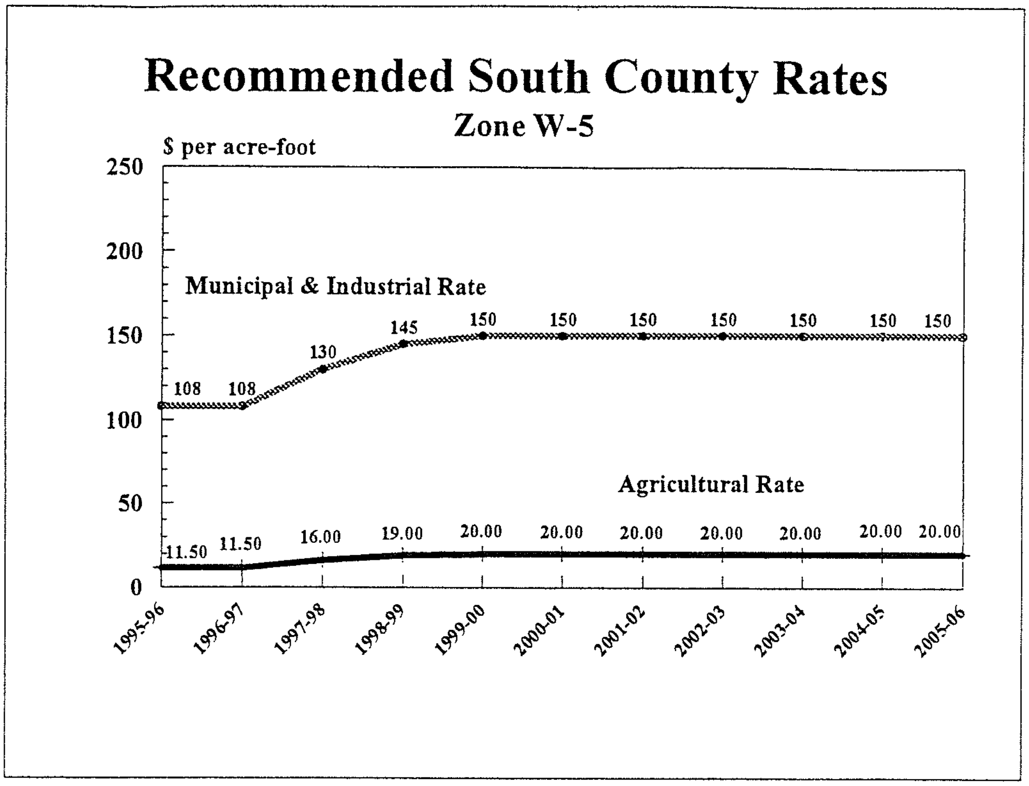
OVERVIEW OF SOUTH COUNTY FINANCES
(Thousands)

	Actual 1994-95	Estimated 1995-96	Projected 1996-97
Revenues*	$3,809	$4,031	$4,220
Costs Operations	2,397	2,305	2,300
Imported Water Purchases	1,507	1,549	1,814
Amortized Capital Improvements	327	327	327
Total Costs	$4,231	$4,181	$4,441
Surplus (Deficit)	(422)	(150)	(221)

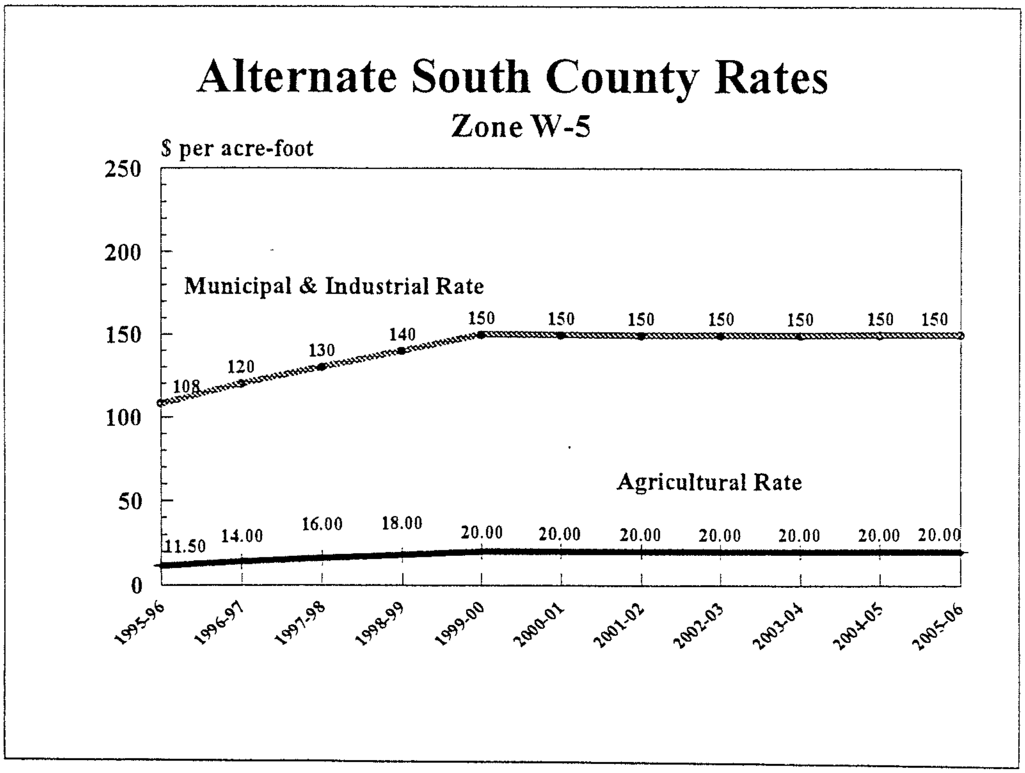
*Includes open-space credit

The upper half of Figure 3 shows the rate projection for the 10 years to 2005-06. Assuming rates are unchanged in 1996-97, the projections show M&I rates increasing in three steps to $150 per acre-foot in 1999-00 and agricultural water rates increasing to $20 per acre-foot in 1999-00.

The lower half of Figure 3 shows an alternative rate program using the same revenue and cost projections as above. The alternative shows a rate increase of $120 per acre-foot in 1996-97 that would balance revenues and costs in 1996-97. Successive increases reaching $150 per acre-foot for M&I and $20 per acre-foot for agricultural water in 1999-00 would still be required.


Recommended South County Rates

Zone W-5


Alternate South County Rates

Zone W-5

III. Water Resource Challenges

The water utility is challenged by cost pressures on many fronts:

- Facility operation and maintenance
- Reliability of imported water supplies
- Capital improvement program

This section concludes with background information on water use trends in Santa Clara County and County water supplies.

Facility Operation and Maintenance

As the District's investment in water treatment and conveyance facilities grows, so does the cost of operations and maintenance. Moreover, the complexity of water utility operations is continually increasing as more regulatory requirements are imposed on treatment plant operations and maintenance procedures. To date, the District has met these challenges through efficiency improvements and investments in automation. Expenditures for operations are projected to grow because of increasing costs for chemicals used in water treatment plants, and a variety of water quality management tasks. Maintenance expenditures are projected to increase as aging treatment plants and pipelines require repair and replacement of equipment. The District has identified numerous process and control system upgrades for the treatment plants and treated water pipelines that will be evaluated over the next year for possible inclusion in the capital improvement program.

Imported Water Reliability

Existing and proposed environmental regulations in the San Francisco Bay/Delta continue to affect the District's expected imported supplies. The EPA finalized its Delta water quality standards in December 1994, and the State Water Resources Control Board is preparing to implement a Bay/Delta protection plan consistent with the principles agreed to by the State and federal governments in December 1994.

As discussed in Section I, the water utility is actively working to maintain the reliability of its imported water supplies from the State Water Project (SWP) and CVP. In December 1995, the Board approved $500,000 from the Supplemental Water Supply Appropriation as the District's initial contribution to the Bay-Delta Accord Category III program to address nonflow factors affecting water quality. Discussions with other imported water contractors to reallocate entitlements and to bank surplus water are currently underway and expected to result in final agreements by the end of the fiscal year. It is estimated that these agreements could cost up to $5 million.

In addition, several other imported water project activities could require significant outlays:

> *SWP*—In addition to the banking agreements discussed above, the District could purchase options to acquire supplemental water from the SWP in years of below-average rainfall. Supplemental water is unlikely to be purchased every year, however. The Supplemental Water Supply Appropriation is available to acquire supplemental water, and no specific expenditures have been projected.

In 1994, the SWP contractors, including the District, negotiated an agreement revising contract provisions affecting allocation of water shortages and operational and financial control of the SWP. Under provisions of the resulting "Monterey Agreement," the District has an opportunity to purchase 20,000 acre-feet of additional entitlement from the SWP. The cost and timing of this potential purchase are currently unknown because price and other terms are being negotiated. An agreement could be reached in 1996-97, but recent litigation could delay any purchases to FY 1997-98 or later. The Supplemental Water Supply Appropriation is the most likely source of funds for this additional entitlement.

CVP—For the CVP, the District anticipates paying off its repayment obligations after renegotiation of the CVP contract, which is required by September 30, 1997 under the provisions of the Central Valley Project Improvement Act. This anticipated payment will be funded from the Bureau Repayment Appropriation, and will be paid out over 3 years beginning in FY 1997-98.

The District continues to explore the possibility of purchasing the San Felipe Division of the CVP. The costs of the San Felipe Division are currently financed by the federal government, and the District would have to arrange debt financing if the District were to conclude an agreement for outright purchase. Staff is not projecting any additional costs or financing plan related to acquiring the San Felipe Division at this time because of the many uncertainties surrounding the purchase.

Capital Improvement Program

Construction of Phase II of the Raw Water Control System began in 1994 to continue automating control of the District's Countywide conveyance, treatment, and distribution system. Work to restore the freeboard at Lexington Dam is in progress. The Parallel East Pipeline Stage I in east San Jose and the San Pedro Recharge Facility in Morgan Hill are under construction. Also, work is underway to control seepage at Uvas Dam in South County.

For fiscal year 1996-97, there are only five new capital projects. These projects are primarily in the area of preventative maintenance or seismic retrofits of existing facilities, with the exception of the Parallel East Pipeline Stage 2 project.

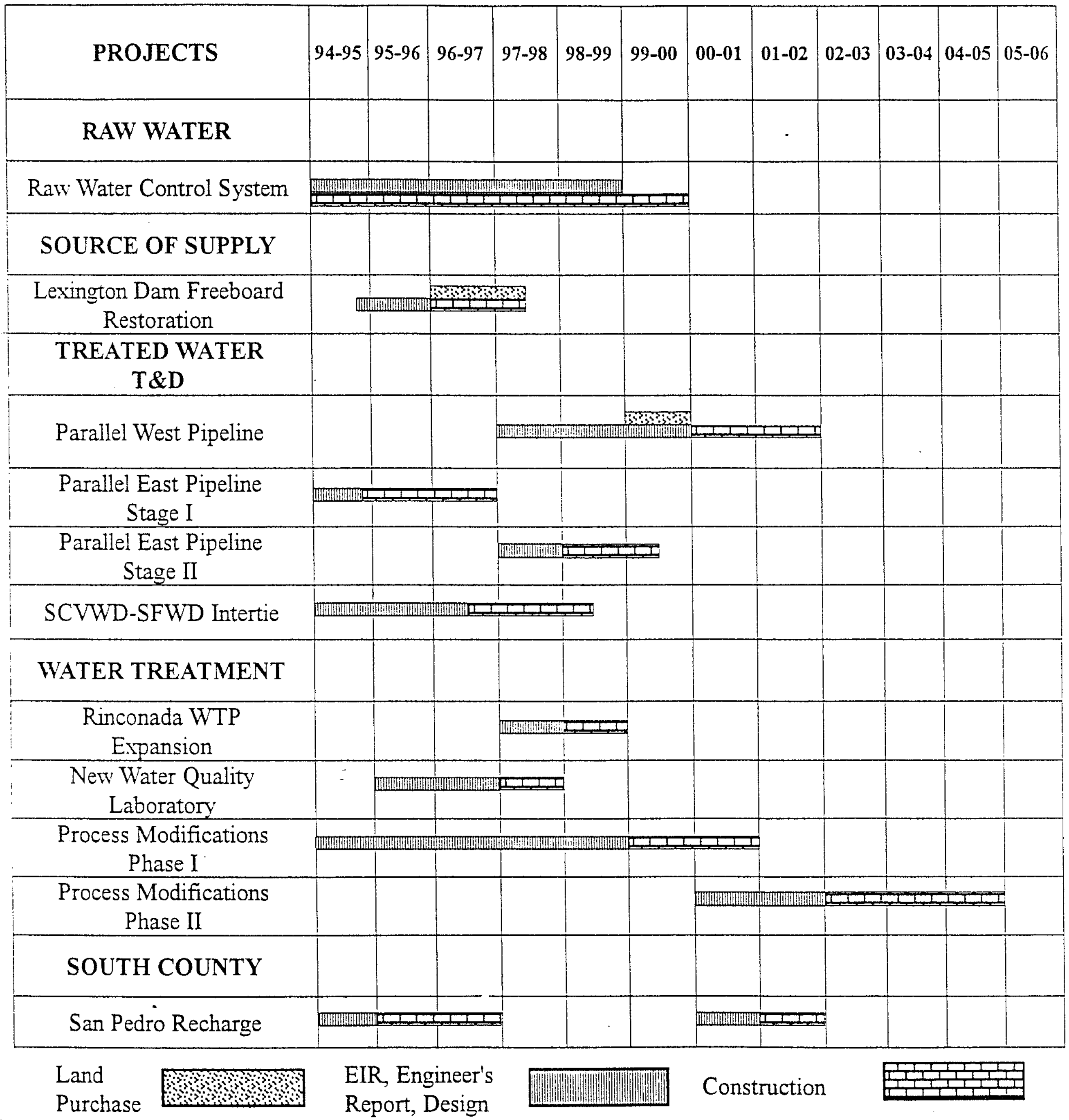
In the longer term, the Water Utility will be significantly impacted by capital improvements expected to be required by regulations governing disinfection by-products. For several years, the District has anticipated that the EPA would finalize regulations under the Safe Drinking Water Act that would govern disinfection processes at the three water treatment plants. Regulations that have been proposed would require two phases of major modifications to water treatment processes and are estimated to require capital improvements totaling over $120 million in current dollars at the three treatment plants. The first phase of regulations are now expected to go into effect in 2000. Timing for the second phase regulations is unknown, but implementation could occur by 2004 or later.

Figure 4 shows schedules for major projects underway and planned by the Water Utility. Future projects include Parallel West Pipeline, Santa Clara Valley Water District—San Francisco Water Department Intertie, disinfection modifications at all three water treatment plants, Rinconada capacity expansion, and a new water quality laboratory.

A map in Appendix C shows the location of the District's major existing and proposed facilities.

FIGURE 4
MAJOR CAPITAL IMPROVEMENT PROJECTS

Fiscal Year 1994-95 Through 2005-06



April 2, 1996

Long-Term Water Use Trends

Water use in the County is categorized as either agricultural or municipal and industrial (M&I). Recorded fiscal year North County water use since 1964-65 and South County water use since 1987-88 (when the District merged with Gavilan Water Conservation District) is shown in Figure 4. Metcalf Road is the dividing line between North County Zone W-2 and South County Zone W-5 (see map in Appendix C).

Water use in North County is predominantly M&I. Current projections indicate an increase in M&I use through 2020, when the total North County annual water use is projected to be 369,000 acre-feet. Agricultural water use is expected to range between 3,000 and 4,000 acre-feet per year through the year 2020.

In South County, it is anticipated that M&I water use will continue to increase while agricultural use will decrease. The latest projections for South County anticipate total water use of about 79,000 acre-feet per year by the year 2020. M&I and agricultural water uses are projected to be 49,000 acre-feet and 30,000 acre-feet per year, respectively.

The projected water usage discussed above and shown in Figure 5 totals 448,000 acre-feet in 2020. This represents the likely outcome of many factors, including population trends, employment growth, water conservation practices, and plumbing code changes. Alternative circumstances could lead to total county water needs ranging from as low as 350,000 acre-feet to as high as 500,000 acre-feet in 2020.

Long-Term Water Supply Trends

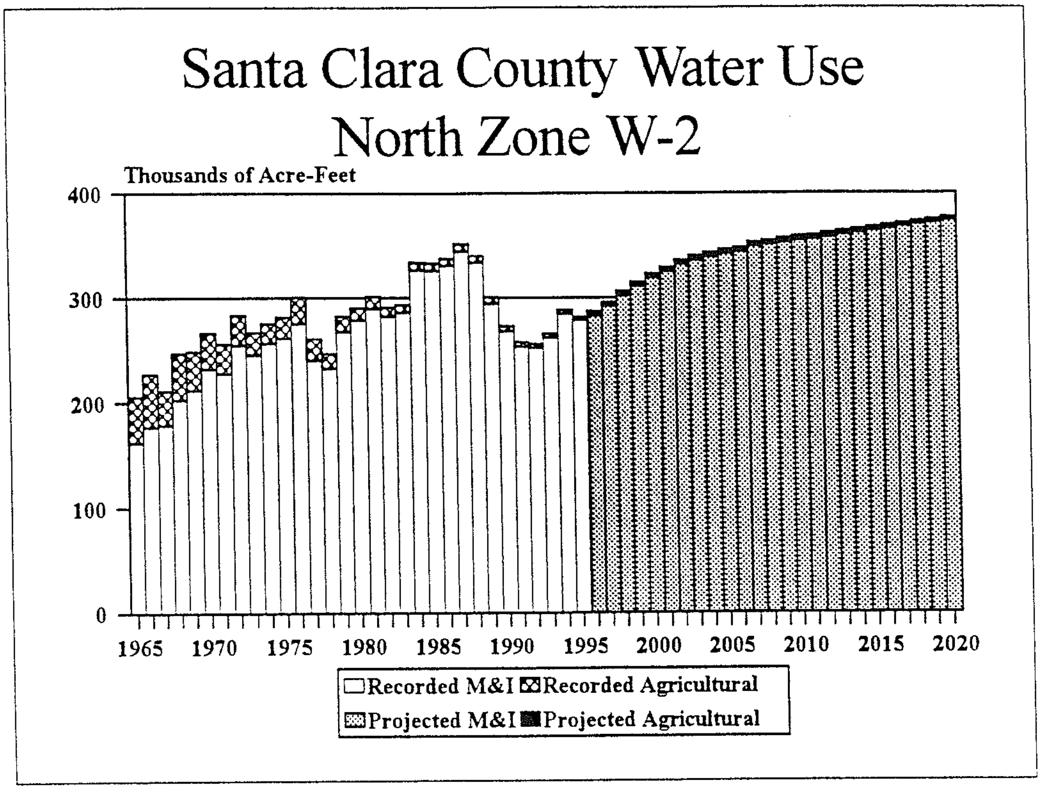
The District's water supply includes water imported from the Sacramento-San Joaquin Delta, local water stored in reservoirs and groundwater subbasins, and reclaimed water. The Santa Clara Valley Groundwater Subbasin is in the North County, while both the Coyote and Llagas Groundwater Subbasins are in South County.

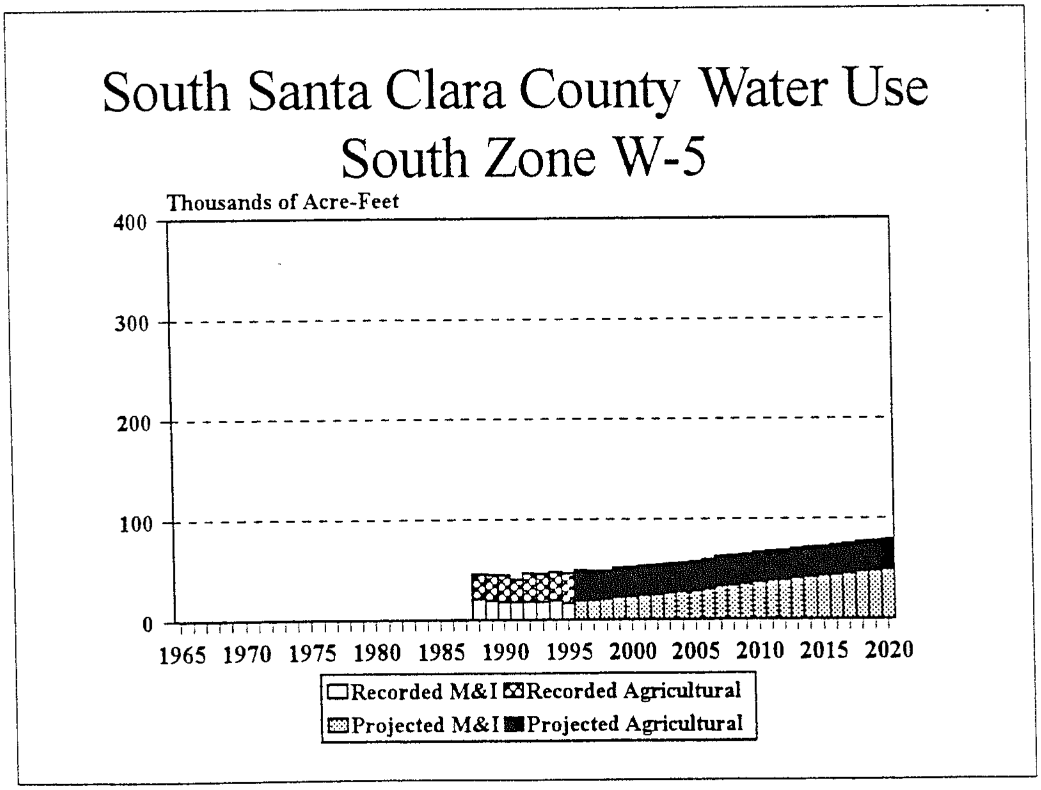
Sources of water supply in North County consist of locally developed water and water imported via the SWP's South Bay Aqueduct, the federal CVP's San Felipe Division, and the City and County of San Francisco's Bay Division Pipelines (Hetch Hetchy). South County is supplied by locally developed water and water imported via the San Felipe Division. The recorded water supply in North County since 1964-65 and South County since 1987-88 is shown in Figure 6.

Within the County, the District continues its conjunctive use program of recharging surface water to augment groundwater supplies. The District is providing financial contributions to the City of Santa Clara for delivery of reclaimed water for nonpotable uses. Future local supplies are projected to be augmented by nonpotable water from reclamation facilities in San Jose, Sunnyvale, and Gilroy/Morgan Hill.

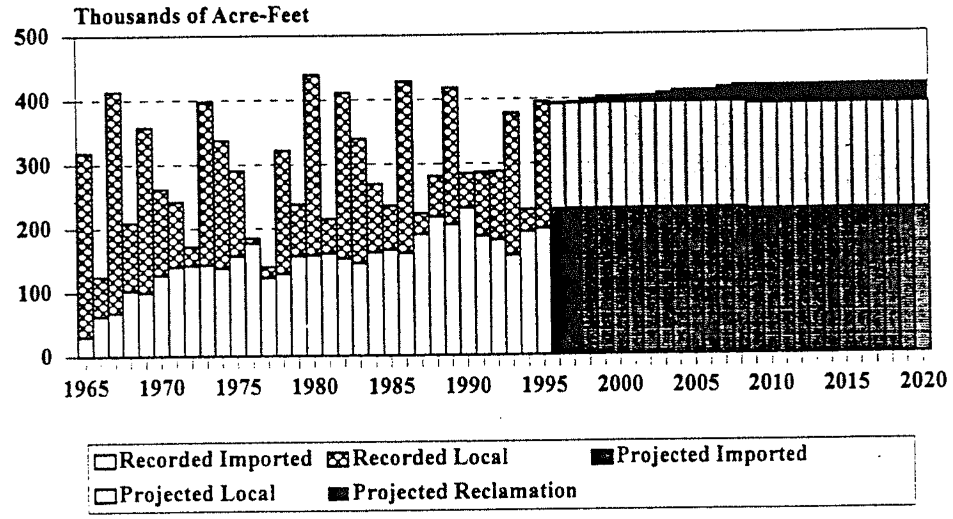
The District, along with numerous other urban water agencies, is participating in the statewide Water Conservation Memorandum of Understanding to implement 16 urban water use Best Management Practices (BMPs). In addition, the District has started urban water use conservation programs beyond the BMPs. The District is also implementing agricultural water conservation required under the CVP Improvement Act.

FIGURE 5

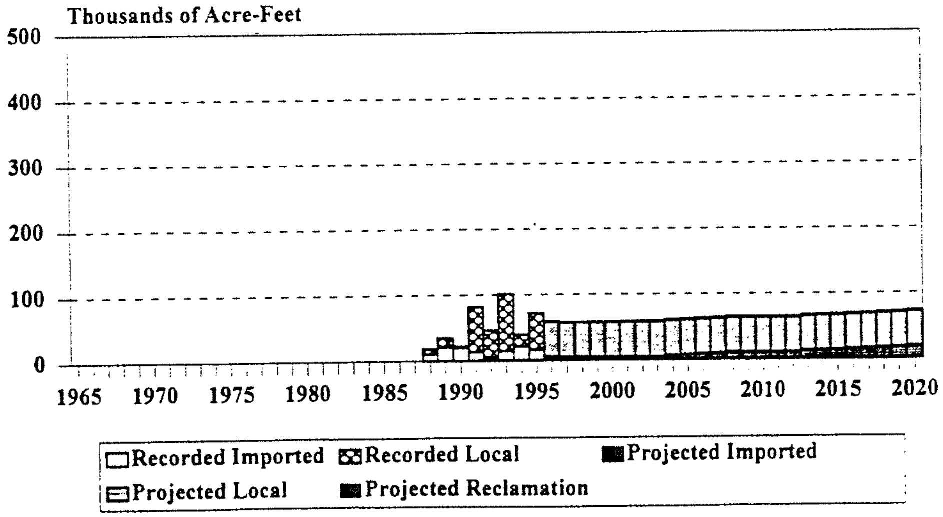

Santa Clara County Water Use
North Zone W-2


South Santa Clara County Water Use
South Zone W-5

Santa Clara County Water Supply
North Zone W-2



Santa Clara County Water Supply
South Zone W-5



Water Supplies in 1995 and 1996

Tables 5 and 6 summarize the District's sources of water and the disposition of supply between consumptive use and storage in surface reservoirs and underground water basins.

As of late March local rainfall in the 1995-96 season was approximately equal to the historical season average, and storage in the surface water reservoirs was over 90 percent of capacity. The groundwater basins contained about 300,000 acre-feet in January 1996.

To effectively use and store both local and imported water supplies, the District is optimizing the use of imported water within the County and actively pursuing banking alternatives for the remaining imported water entitlements in calendar year 1996. One hundred percent of the State Water Project (SWP) entitlement of 100,000 acre-feet is available to the District. Table 6 shows only 25,000 acre-feet being brought into the District; however, the District is seeking to bank excess water outside the County. The CVP has indicated that 100 percent of the full M&I entitlement of 119,400 acre-feet will be available and that 26,000 acre-feet of agricultural water will be available. Again, the District is unable to import the full amount available and will seek to bank unused entitlements. In 1996, the San Francisco Water Department (SFWD) is expected to deliver about 76,000 acre-feet of water to retail water agencies in the northern part of the County. Thus, including CVP agricultural entitlements, the total imported water supply available for calendar year 1996 exceeds 300,000 acre-feet.

TABLE 5

Calendar Year 1995 Recorded Water Supply and Use (Acre-Feet)

BEGINNING STORAGE

Santa Clara Valley Subbasin		
Surface Reservoirs	51,000	
Groundwater	168,000	
Subbasin Total		219,000
Coyote and Llagas Subbasins		
Surface Reservoirs	1,000	
Groundwater	82,000	
Subbasin Total		83,000
San Benito County		
San Justo Reservoir*		2,000
Total Beginning Storage		**304,000**

SUPPLY

Imports:	
Hetch Hetchy (74 percent of 76,000 AF)	60,000
State Water Project (65 percent of 100,000 AF)	29,000
San Felipe Division (58 percent of 152,500 AF)	125,000
Local Supply:	
San Jose Water Company	17,000
Santa Clara Valley Subbasin	180,000
Coyote and Llagas Subbasins	56,000
Total Supply	**467,000**

USE

North County Use	298,000
South County Use	50,000
Total Use	**348,000**

TABLE 5

(Continued)

CHANGE IN STORAGE		
Santa Clara Valley Subbasin		
Surface Reservoirs	44,000	
Groundwater	43,000	
Subbasin Total		87,000
Coyote and Llagas Subbasins		
Surface Reservoirs	9,000	
Groundwater**	7,000	
Subbasin Total		16,000
San Benito County		
San Justo Reservoir*		16,000
Total Storage Change		**119,000**

END OF YEAR STORAGE		
Santa Clara Valley Subbasin		
Surface Reservoirs	95,000	
Groundwater	211,000	
Subbasin Total		306,000
Coyote and Llagas Subbasins		
Surface Reservoirs	10,000	
Groundwater	89,000	
Subbasin Total		99,000
San Benito County		
San Justo Reservoir*		18,000
Total End of Year Storage		**423,000**

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[*] Water from San Felipe allocation banked in San Benito County.

[**] Water Year Change in Storage Estimate

TABLE 6

Calendar Year 1996 Projected Water Supply and Use (Acre-Feet)*

BEGINNING STORAGE

Santa Clara Valley Subbasin		
Surface Reservoirs	95,000	
Groundwater	211,000	
Subbasin Total		306,000
Coyote and Llagas Subbasins		
Surface Reservoirs	10,000	
Groundwater	89,000	
Subbasin Total		99,000
San Benito County		
San Justo Reservoir**		18,000
Total Beginning End of Year Storage		**423,000**

SUPPLY

Imports:	
Hetch Hetchy (100 percent 76,000 AF)	76,000
State Water Project (25 percent of 100,000 AF)	25,000
San Felipe Division (69 percent of 152,500 AF)	105,000
Local Supply:	
San Jose Water Company	17,000
Santa Clara Valley Subbasin	118,000
Coyote and Llagas Subbasins	41,000
Total Supply	**366,000**

USE

North County Use	304,000
South County Use	50,000
Total Use	**354,000**

TABLE 6

(Continued)

CHANGE IN STORAGE

Santa Clara Valley Subbasin		
Surface Reservoirs	0	
Groundwater	24,000	
Subbasin Total		24,000
Coyote and Llagas Subbasins		
Surface Reservoirs	0	
Groundwater	4,000	
Subbasin Total		4,000
San Benito County		
San Justo Reservoir		(16,000)
Total Storage Change		**12,000**

END OF YEAR STORAGE

Santa Clara Valley Subbasin		
Surface Reservoirs	95,000	
Groundwater	235,000	
Subbasin Total		330,000
Coyote and Llagas Subbasins		
Surface Reservoirs	10,000	
Groundwater	93,000	
Subbasin Total		103,000
San Benito County		
San Justo Reservoir		2,000
Total End of Year Storage		**435,000**

---

* Projected using data available in March 1996—subject to change.

** Central Valley Project entitlement banked in San Benito County.

APPENDIX A

WATER UTILITY RATE COMPONENTS AND RECOMMENDED RATES

TABLE A-1

RECOMMENDED WATER RATE COMPONENTS FOR FISCAL YEAR 1996-97

Component	Rate (AF)
Basic User, Zone W-2	
Agricultural	$43.75
Municipal and Industrial	240.00
Basic User, Zone W-5	
Agricultural	11.50
Municipal and Industrial	108.00
Treated Water Surcharge	
Contract	70.00
Noncontract	50.00
Water Master	11.75
Capital Cost	
Half Road Lateral System	2.75

TABLE A-2

RECOMMENDED WATER CHARGES FOR FISCAL YEAR 1996-97

Type of Charge	AG Water (AF)	M&I Water (AF)
Groundwater		
Zone W-2	$43.75	$240.00
Zone W-5	11.50	108.00
Surface Water [1]		
Evergreen Deliveries [2]	228.00	N/A
Half Road Deliveries [3]	26.00	122.50
Other Zone W-5 Deliveries [4]	23.25	119.75
Other Zone W-2 Deliveries [5]	55.50	251.75
Minimum Charge—Zone W-5 [6]	81.00	81.00
Minimum Charge—Zone W-2 [7]	180.00	180.00
Stored Water		
Zone W-2	43.75	240.00
Zone W-5	11.50	108.00
Treated Water [8]		
Contract	N/A	310.00
Noncontract	N/A	290.00
Reclaimed Water		
Gilroy	20.00	80.00

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[1] Surface water charge is the sum of the basic user charge plus the water master charge. It also includes the capital cost and power, wherever applicable.

[2] Evergreen agricultural delivery charges for 1992 through 1995 equal the 1988-89 rate ($72.00/AF) plus 50 percent of the City of San Jose's wheeling charge. The District no longer delivers M&I water to the Evergreen Area.

[3] Half Road = Basic User (AG or M&I @ $11.50 or $108.00) + Water Master ($11.75) + Capital ($2.75).

[4] Other Zone W-5 Deliveries = Basic User (AG or M&I @ $11.50 or $108.00) + Water Master ($11.75).

[5] Other Zone W-2 Deliveries = Basic User (AG or M&I @ $43.75 or $240.00)+ Water Master ($11.75).

[6] Minimum Charge W-5 = 0.75 X Basic User W-5 (M&I @ $108.00).

[7] Minimum Charge W-2 = 0.75 X Basic User W-2 (M&I @ $240.00).

[8] Treated Water Charge is the sum of Basic User ($240.00) and Treated Water Surcharge ($70.00/AF).

APPENDIX B

DESCRIPTION OF WATER UTILITY REVENUE SOURCES, COST CENTERS, AND RESERVES

Pricing Policy

The District's Board of Directors, upon recommendation of the Santa Clara Valley Water Commission, adopted the current water pricing policy in 1971. This pricing policy incorporates two important concepts: (1) a water pooling concept in which water for a given zone of benefit is considered a single commodity with a uniform value regardless of source or cost, and (2) a water management concept in which the user pays for benefits received. This pricing policy was affirmed in a Board work/study session on March 14, 1995.

Water Charges

- Water charges include a **groundwater charge**, which is equivalent to the **basic user charge**, and is associated with the benefit of groundwater supplies. The groundwater charge is an excise tax applied to water extracted from the groundwater basin in Zones W-2 and W-5 as shown in Appendix C. The basic user charge is applied to other types of water delivered by the District. There are two rates, one for agricultural water and one for M&I water.

- A **treated water surcharge**, which is associated with the benefit of receiving treated water, is levied in addition to the basic user charge on water delivered from the District's water treatment plants.

Property Taxes

Ad valorem taxes provide revenue to support several benefits which are general in nature serving all, or large areas of the County. Some of these benefits are the availability of imported water to the County, recreation associated with the District's reservoirs, and replenishment of the County's groundwater subbasins.

The District receives a portion of the 1 percent Countywide tax revenues as allocated by the County Assessor. Tax Zones W-3 and W-4, as well as a Countywide ad valorem tax are part of the 1 percent allocation. In 1992-93, 10 percent of the Water Utility's portion of the 1 percent allocation was reallocated as part of the 1992-93 State budget. It is possible that the Water Utility will be impacted by further State reallocation of the 1 percent ad valorem tax in the future.

The District also levies additional ad valorem taxes under Article XIII A of the State Constitution to meet: (a) prior approved general obligation bond debt service in Zones W-1 and W-6 (zones are shown on the map in Appendix C) and (b) part of the contractual obligations for SWP water with a Countywide tax.

Debt Financing

To fund the construction of new facilities, the District has relied on both pay-as-you-go financing and long-term debt financing from revenue bonds as authorized by the voters in 1977. The last remaining 1977 authorized revenue bonds were sold in April 1984. In January 1984, State legislation allowed the District to seek authorization to issue revenue bonds as needed following the Board of Directors' approval. County voters approved this authorization in November 1984. The District sold an additional $30 million of revenue bonds in November 1985 to provide needed funding for ongoing projects. In August 1986, the District refunded all outstanding water revenue bonds. Again, in June 1994, the District took advantage of favorable market conditions to refund the remaining 1986 water revenue bonds. The 1994 refunding totaled $65.9 million at an effective interest rate of 5.2 percent.

Water Utility Reserves

1. The **Future Year's Capital Appropriation** will finance construction of necessary facilities of the In-County Distribution System. This balance may include monies received from bond sales, taxes, water charges and other revenues.

2. The **Contingency Appropriation** is an amount set aside to meet unforeseen expenditure needs that may arise.

3. The **Replacement Appropriation** sets aside funds to replace major equipment items at the end of their useful lives.

4. The **Working Capital Appropriation** is required to be at least 1/12th of the utility's operating costs, according to the bond master resolution.

5. The **San Felipe O&M Appropriation** sets aside funds for unanticipated operations or maintenance costs on the San Felipe Division.

6. The **Bureau Replacement Appropriation** sets aside funds for repayment of the District's long-term obligation to the Bureau of Reclamation (Bureau) above current year water service contract obligations.

7. The **Supplemental Water Supply Appropriation** sets aside funds to purchase additional water, when needed, and to help finance reclamation and other projects to improve the reliability of District water supplies.

8. The **Rate Stabilization Reserve Fund** was established in the master resolution of the 1994 bond refunding. Transfers from this fund can be used as operating revenue to maintain revenue bond coverage during years of decreased water sales.

In addition to the foregoing balances held by the District, a debt service reserve fund is held by the District's fiscal agent to meet any deficiencies that may occur in meeting the revenue bond debt service. The amount on deposit is equal to 10 percent of the proceeds from the 1994 refunding or $6,591,500.

Water Utility Zones

The major sources of water revenue are from charges levied on all groundwater extracted within Zone W-2 and Zone W-5 of the District and from the sale of approximately 100,000 acre-feet of treated water. Other water charges are made for surface water diversions and sales of reclaimed water in the Gilroy area. A brief description of each water zone (see map in Appendix C) within the Water Utility Enterprise follows:

> **Zone W-1** encompasses the groundwater basin in northern Santa Clara County and small peripheral areas outside the groundwater basin, with the retail service areas of privately-owned public utilities and municipal water departments using water pumped from the groundwater basin. This area provides the security for general obligation bonds. Zone W-1 comprises an area of approximately 290 square miles and includes all or portions of 13 of the County's 15 cities, plus some unincorporated territory.
>
> **Zone W-2** encompasses the Santa Clara Valley groundwater basin north of Metcalf Road. It includes those groundwater producing facilities that benefit from recharge of the basin with local and imported water. A charge is levied for all groundwater extracted from this zone.

Zone W-3 encompasses the Coyote and Llagas groundwater basins in the area from Metcalf Road in the north to just south of the City of Morgan Hill. Part of the County property tax within the 1 percent limit is allocated to this zone.

Zone W-4 contains all of Zone W-2 and lands outside Zone W-2 that use or otherwise benefit from locally conserved water and from the importation and distribution of water from the South Bay Aqueduct. This area also receives an allocation of County taxes. These tax revenues are used to pay for the cost of water, recovery of accumulated overdrafts, control of land surface subsidence, and to sustain the emergency supply of water.

Zone W-5 is comprised of the entire groundwater basin from Metcalf Road south to the Pajaro River. Charges are levied for all groundwater extracted from this zone.

Zone W-6 represents the old Gavilan Water Conservation District and is within Zone W-5.

Water Utility Cost Centers

Source of Supply Cost Center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply; including all conservation, reclamation, and importation costs.

Raw Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.

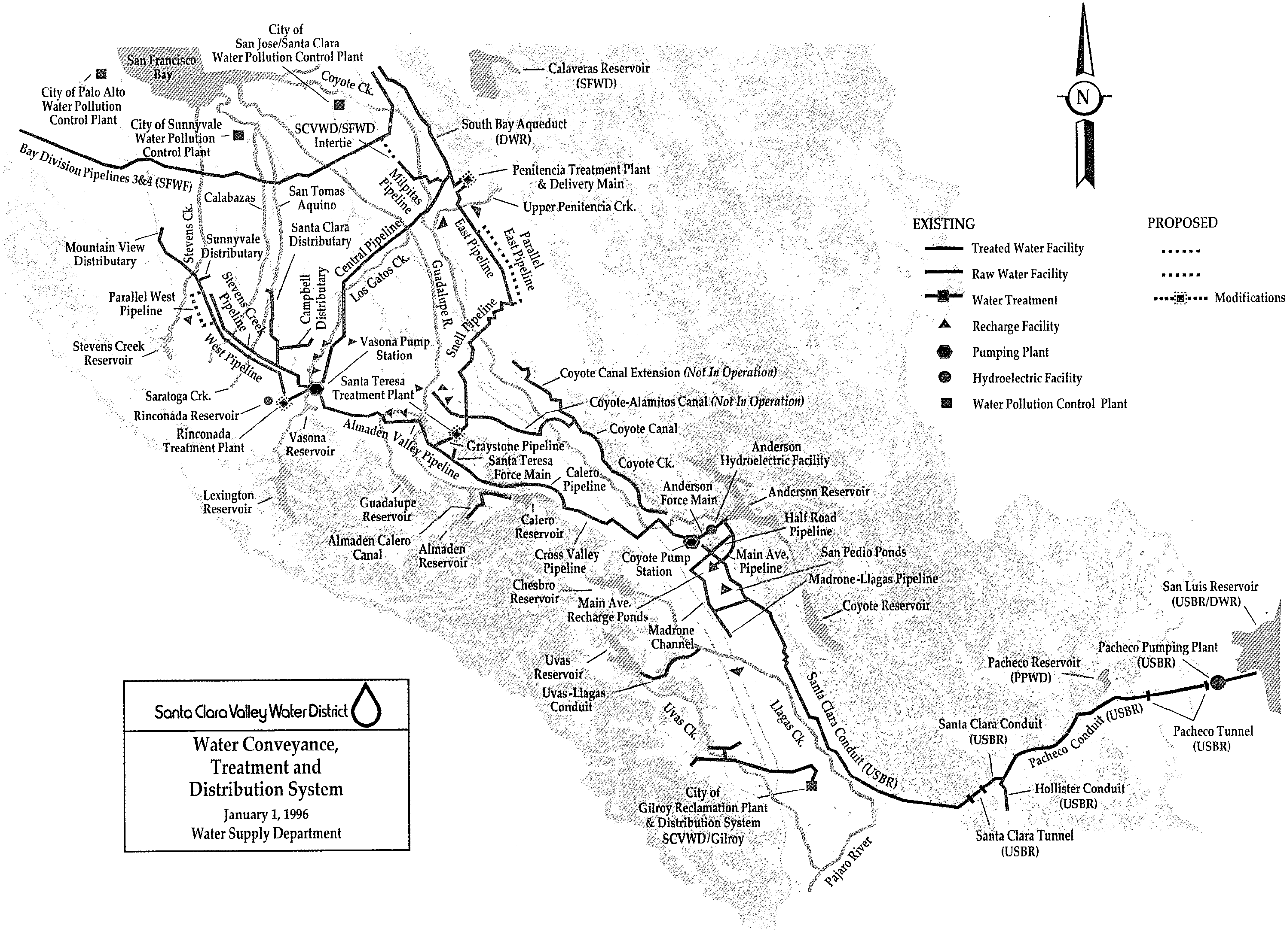
Water Treatment Cost Center contains all expenditures associated with the treatment of water at the Rinconada Water Treatment Plant, Penitencia Water Treatment Plant, and Santa Teresa Water Treatment Plant.

Treated Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of treated water to water utilities and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts.

Administration and General Cost Center contains all expenditures of an administrative nature which are not assigned to one of the other four cost centers. Work performed in this cost center covers items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water quality management, and resource planning.

APPENDIX C

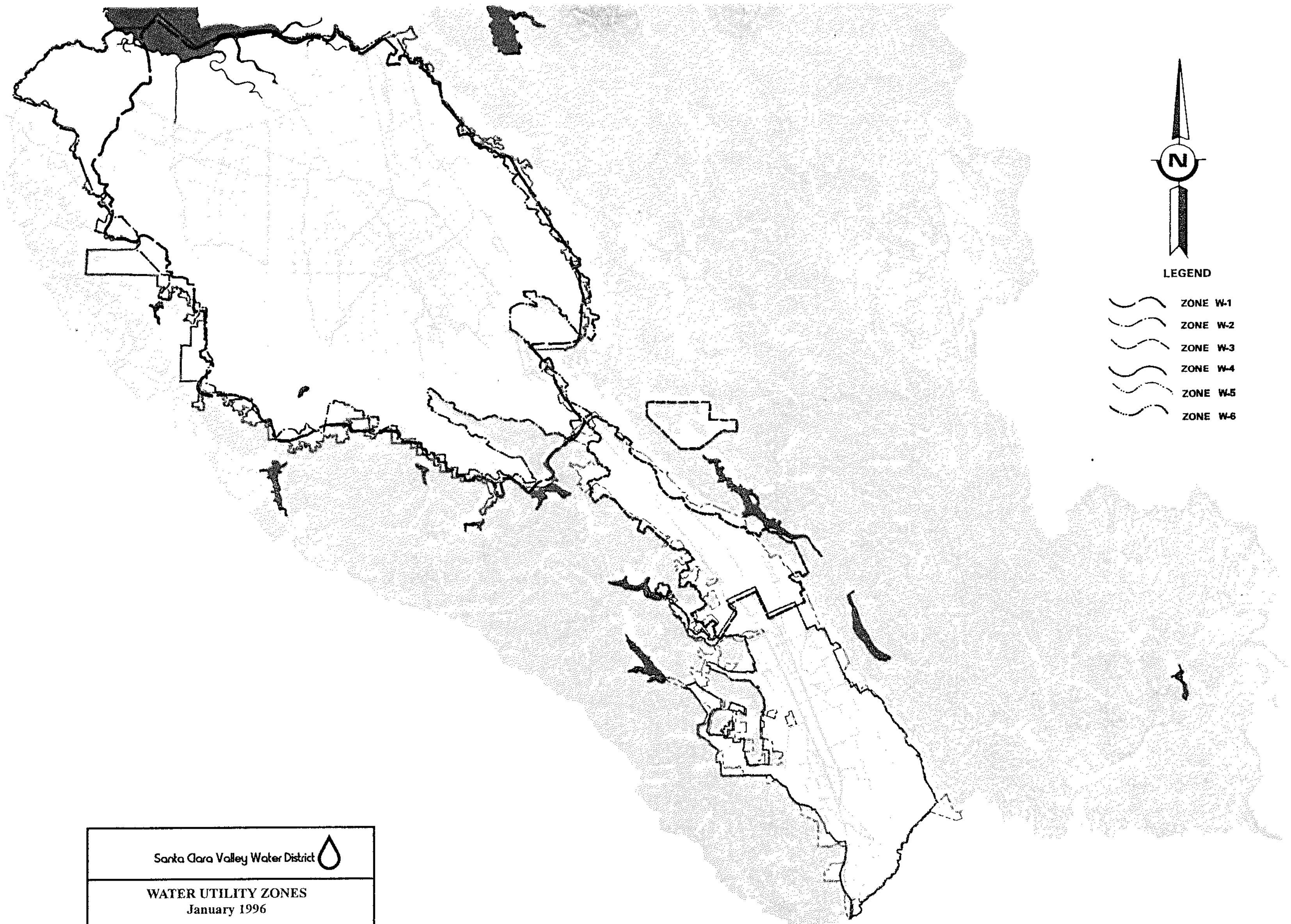
WATER UTILITY FACILITY AND ZONE MAPS



Santa Clara Valley Water District

Water Conveyance, Treatment and Distribution System

January 1, 1996
Water Supply Department



Santa Clara Valley Water District

WATER UTILITY ZONES
January 1996

PREPARED BY
WATER RESOURCES MANAGEMENT GROUP